

ABSTRACT OF THE DISCLOSURE

A network device transfers variable-length data frames across a synchronous network employing a multiple-channel synchronous transport signal. Encapsulation logic encapsulates each data frame in a point-to-point frame including a body portion of the data frame and a length value located in a beginning portion of the point-to-point frame. Segmentation logic divides each point-to-point frame into fixed-sized segments, a first segment carrying the beginning portion of the point-to-point frame. Transmitting circuitry transmits the segments frame as payloads of at least one channel of the synchronous transport signal, the payloads being marked so as to be identifiable. Receiving circuitry receives payloads of at least another channel of the synchronous transport signal and from each received set of payloads regenerates a corresponding point-to-point frame using the length value from the first segment thereof. De-capsulation logic de-capsulates each regenerated point-to-point frame to recover the corresponding data frame.

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